

Appl. No. 09/723,366
Amdt. Dated May 21, 2004
Reply to Office action of February 26, 2004

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Listing of Claims:

Claims 1-15 (cancelled)

Claim 16 (currently amended) The system in accordance with claim ~~15~~ 17 wherein said encapsulated internet protocol packet further includes a switching label and an Internet Protocol destination address corresponding to said target base station and said target base station includes means for removing said ~~internet protocol~~ Internet Protocol destination address from said copy of said data packet unit and means responsive to said switching label for determining an outgoing channel to said mobile.

Claim 17 (currently amended) A system for providing a soft handoff of a mobile from a serving base station to a target base station in an ~~internet protocol~~ Internet Protocol based code division multiple access network, wherein said base stations are autonomous and without a centralized network entity that distributes user traffic to both the serving base station and the target base station, said system comprising

means for transmitting a data packet unit from said serving base station to said mobile,

means at said serving base station for combining upper layer packets with data at one layer to produce lower layer packets, for adding a label to said lower layer data packets to produce a remote layered data packet, and for adding a header to said remote layered data packet to produce an encapsulated ~~internet protocol~~ Internet Protocol packet including a copy of said data packet unit,

means at said serving base station for transmitting said encapsulated internet protocol packet including said remote layered data packet to said target base station; ~~and~~

means at said target base station for relaying said encapsulated remote layered data packet to said mobile without repeating the processing done at said serving base station; and

means, at said mobile, for combining said copy of said data packet unit from said target station with said data packet unit from said serving base station to effectuate the handoff.

Claim 18 (new) A method for soft handoff of a mobile from a serving base station to a target base station in an Internet Protocol (IP) wireless packet switched network wherein said base stations are autonomous without a centralized control, said method comprising the steps of

at the serving base station processing packets in a protocol layer to produce a remote layered data packet that the target station can use as if generated at the target base station and including adding an IP header to the remote layered data packet so as to create an IP encapsulated remote layer data packet;

transmitting from said serving base station said IP encapsulated remote layered data packet to said target base station; and

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said target base station removing said remote layered data packet from said IP encapsulated remote layered data packet and relaying said removed remote layered data packet to said mobile.

Claim 19 (new) The method of claim 18 wherein said step of transmitting said IP encapsulated remote layered data packet comprises sending said IP encapsulated remote layered data packet to said target base station via an IP network.

Claim 20 (new) A method for soft handoff of a mobile from a serving base station to a target base station in an Internet Protocol (IP) based network wherein said serving and target base stations are autonomous without a centralized control, said method comprising the steps of

transmitting over air a data packet from said serving station to said mobile;

at said serving base station combining upper layer packets with data at one layer to produce lower layer packets, adding a label to said lower layer data packets to produce a remote layered data packet, and adding an IP header to said remote layered data packet to produce an encapsulated IP packet including a copy of said data packet;

sending from said serving base station to said target base station said encapsulated IP packet including said remote layered data packet through a cross layer tunnel between said base station and the target base station,

said target base station removing said remote layered data packet from said encapsulated IP packet and relaying said remote layered data packet to said mobile; and

combining at said mobile said data packet from said serving station and said remote layered data packet from said target base station.

Claim 21 (new) The method in accordance with claim 20 wherein said step of combining at said mobile comprises the steps of

comparing the data received from the serving base station with the remote layered data received from said target base station,

if said step of comparing indicates a match, then combining the data from said serving base station and the data from said target base station; and

if said step of comparing does not indicate a match, then further comparing N data blocks from said serving base station with the data from said target base station until a match is obtained.